

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 1. (currently amended) A method for identifying an
2 acoustic scene, ~~whereas the method comprises~~ comprising the
3 steps of:
4 ~~that recording~~ an acoustic input signal; ~~and preferably~~
5 ~~recorded by at least one microphone~~
6 ~~providing is processed in~~ at least two processing stages
7 ~~wherein in such a manner~~
8 ~~—that~~ an extraction phase is provided in at least one of
9 the at least two processing stages, in which said
10 extraction phase characteristic features are
11 extracted from the input signal, and wherein
12 ~~—that~~ an identification phase is provided in each
13 processing stage, in which said identification phase
14 the extracted characteristic features are
15 classified, and further wherein
16 ~~whereby~~ class information is generated according to the
17 classification of the features in at least one of
18 the processing stages, ~~which~~ wherein said class
19 information characterizes or identifies the acoustic
20 scene.

1 2. (original) The method according to claim 1, wherein an
2 extraction phase is provided in each processing stage, in
3 which extraction phase characteristic features are extracted
4 from the input signal.

1 3. (currently amended) ~~The method according to claim 1, A~~
2 method for identifying an acoustic scene, comprising the steps
3 of:

4 recording an acoustic input signal; and
5 providing at least two processing stages wherein
6 an extraction phase is provided in at least one of the at
7 least two processing stages, in which said
8 extraction phase characteristic features are
9 extracted from the input signal, and wherein
10 an identification phase is provided in each processing
11 stage, in which said identification phase the
12 extracted characteristic features are classified,
13 and further wherein
14 class information is generated according to the
15 classification of the features in at least one of
16 the processing stages, wherein said class
17 information characterizes or identifies the acoustic
18 scene,
19 wherein a manner of processing in a processing stage is
20 selected according to the class information obtained
21 in another processing stage.

1 4. (currently amended) ~~The method according to claim 2, A~~
2 method for identifying an acoustic scene, comprising the steps
3 of:

4 recording an acoustic input signal; and
5 providing at least two processing stages wherein
6 an extraction phase is provided in at least one of the at
7 least two processing stages, in which said
8 extraction phase characteristic features are
9 extracted from the input signal, and wherein
10 an identification phase is provided in each processing
11 stage, in which said identification phase the
12 extracted characteristic features are classified,
13 and further wherein
14 class information is generated according to the
15 classification of the features in at least one of

16 the processing stages, wherein said class
17 information characterizes or identifies the acoustic
18 scene, and wherein an extraction phase is provided
19 in each processing stage, in which extraction phase
20 characteristic features are extracted from the input
21 signal, and further wherein
22 a manner of processing in a processing stage is selected
23 according to the class information obtained in
24 another processing stage.

1 5. (currently amended) ~~The method according to claim 2, A~~
2 method for identifying an acoustic scene, comprising the steps
3 of:

4 recording an acoustic input signal; and
5 providing at least two processing stages wherein
6 an extraction phase is provided in at least one of the at
7 least two processing stages, in which said
8 extraction phase characteristic features are
9 extracted from the input signal, and wherein
10 an identification phase is provided in each processing
11 stage, in which said identification phase the
12 extracted characteristic features are classified,
13 and further wherein

14 class information is generated according to the
15 classification of the features in at least one of
16 the processing stages, wherein said class
17 information characterizes or identifies the acoustic
18 scene, and wherein an extraction phase is provided
19 in each processing stage, in which extraction phase
20 characteristic features are extracted from the input
21 signal, and further wherein

22 the class information obtained in the identification
23 phase of a processing stage i determines a

24 processing manner in one of the following, inferior
25 processing stages $i+1$.

1 6. (original) The method according to claim 3, wherein
2 the class information obtained in the identification phase of
3 a processing stage i determines a processing manner in one of
4 the following, inferior processing stages $i+1$.

1 7. (original) The method according to claim 4, wherein
2 the class information obtained in the identification phase of
3 a processing stage i determines a processing manner in one of
4 the following, inferior processing stages $i+1$.

1 8. (original) The method according to claim 5, wherein,
2 according to class information obtained in the processing
3 stage i , specific features are selected in the extraction
4 phase of the following, inferior processing stage $i+1$ and/or
5 specific classification methods are selected in the
6 identification phase of the following, inferior processing
7 stage $i+1$.

1 9. (original) The method according to claim 6, wherein,
2 according to class information obtained in the processing
3 stage i , specific features are selected in the extraction
4 phase of the following, inferior processing stage $i+1$ and/or
5 specific classification methods are selected in the
6 identification phase of the following, inferior processing
7 stage $i+1$.

1 10. (original) The method according to claim 7, wherein,
2 according to class information obtained in the processing
3 stage i , specific features are selected in the extraction
4 phase of the following, inferior processing stage $i+1$ and/or
5 specific classification methods are selected in the

6 identification phase of the following, inferior processing
7 stage $i+1$.

1 11. (original) Method according to claim 1, wherein a
2 post-processing phase is provided in at least one processing
3 stage subsequent to the extraction phase, in which
4 postprocessing stage the class information are revised in
5 order to generate revised class information.

1 12. (original) Method according to claim 2, wherein a
2 post-processing phase is provided in at least one processing
3 stage subsequent to the extraction phase, in which
4 postprocessing stage the class information are revised in
5 order to generate revised class information.

1 13. (original) Method according to claim 3, wherein a
2 post-processing phase is provided in at least one processing
3 stage subsequent to the extraction phase, in which
4 postprocessing stage the class information are revised in
5 order to generate revised class information.

1 14. (original) Method according to claim 4, wherein a
2 post-processing phase is provided in at least one processing
3 stage subsequent to the extraction phase, in which
4 postprocessing stage the class information are revised in
5 order to generate revised class information.

1 15. (original) Method according to claim 5, wherein a
2 post-processing phase is provided in at least one processing
3 stage subsequent to the extraction phase, in which
4 postprocessing stage the class information are revised in
5 order to generate revised class information.

1 16. (original) Method according to claim 6, wherein a

2 post-processing phase is provided in at least one processing
3 stage subsequent to the extraction phase, in which
4 postprocessing stage the class information are revised in
5 order to generate revised class information.

1 17. (original) Method according to claim 7, wherein a
2 post-processing phase is provided in at least one processing
3 stage subsequent to the extraction phase, in which
4 postprocessing stage the class information are revised in
5 order to generate revised class information.

1 18. (original) Method according to claim 8, wherein a
2 post-processing phase is provided in at least one processing
3 stage subsequent to the extraction phase, in which
4 postprocessing stage the class information are revised in
5 order to generate revised class information.

1 19. (currently amended) The method according to claim 1,
2 wherein one or more of the following classification methods is
3 used in the identification phase:

- 4 -Hidden Markov Models;
- 5 -Fuzzy Logic;
- 6 -Bayes Classifier;
- 7 -Rule-based Classifier
- 8 -Neuronal Networks; and
- 9 -Minimal Distance.

1 20. (original) Method according to claim 1, wherein
2 technical and/or auditory-based features are extracted in the
3 extraction phase.

1 21. (original) Use of the method according to one of the
2 claims 1 to 20 for the adjustment of at least one hearing
3 device to a momentary acoustic scene.

1 22. (original) Use of the method according to claim 21,
2 wherein a hearing program or a transfer function between at
3 least one microphone and a speaker in a hearing device is
4 selected according to a determined acoustic scene.

1 23. (original) Use of the method according to one of the
2 claims 1 to 20 for speech analysis or speech detection.

1 24. (canceled).

1 25. (currently amended) The device according to claim 42
2 24, further comprising a feature extraction unit in each
3 processing stage.

1 26. (currently amended) The device according to claim 42
2 24, wherein the class information is fed to other processing
3 stages.

1 27. (original) The device according to claim 25, wherein
2 the class information is fed to other processing stages.

1 28. (currently amended) The device according to claim 42
2 24, wherein the class information of a processing stage i is
3 fed to a following, inferior processing stage $i+1$.

1 29. (original) The device according to claim 25, wherein
2 the class information of a processing stage i is fed to a
3 following, inferior processing stage $i+1$.

1 30. (original) The device according to claim 26, wherein
2 the class information of a processing stage i is fed to a
3 following, inferior processing stage $i+1$.

1 31. (original) The device according to claim 27, wherein

2 the class information of a processing stage i is fed to a
3 following, inferior processing stage $i+1$.

1 32. (original) The device according to claim 28, wherein
2 the class information of a processing stage i is fed to a
3 feature extraction unit of a following, inferior processing
4 stage $i+1$, and/or wherein the class information of a
5 processing stage i is fed to a classification unit of a
6 following, inferior processing stage $i+1$.

1 33. (original) The device according to claim 29, wherein
2 the class information of a processing stage i is fed to a
3 feature extraction unit of a following, inferior processing
4 stage $i+1$, and/or wherein the class information of a
5 processing stage i is fed to a classification unit of a
6 following, inferior processing stage $i+1$.

1 34. (original) The device according to claim 30, wherein
2 the class information of a processing stage i is fed to a
3 feature extraction unit of a following, inferior processing
4 stage $i+1$, and/or wherein the class information of a
5 processing stage i is fed to a classification unit of a
6 following, inferior processing stage $i+1$.

1 35. (original) The device according to claim 31, wherein
2 the class information of a processing stage i is fed to a
3 feature extraction unit of a following, inferior processing
4 stage $i+1$, and/or wherein the class information of a
5 processing stage i is fed to a classification unit of a
6 following, inferior processing stage $i+1$.

1 36. (currently amended) The device according to one of
2 the claims 24 25 to 35 and 42, wherein the class information
3 obtained in at least one processing stage is fed to a post-

4 processing unit in order to generate revised class
5 information.

1 37. (currently amended) The device according to claim 42
2 ~~24~~ or 25, wherein the class information of all processing
3 stages is fed to a decision unit.

1 38. (original) The device according to claim 37, wherein
2 the decision unit is operatively connected to at least one of
3 the feature extraction units and/or to at least one of the
4 classification units.

1 39. (currently amended) A hearing device with a transfer
2 unit operatively connected to at least one microphone and to a
3 converter unit, in particular to a speaker, and with a device
4 according to one of the claims ~~24~~ 25 to 35 and 42 for
5 generating class information, whereas the class information is
6 fed to the transfer unit.

1 40. (currently amended) The hearing device according to
2 claim 39, further comprising an input unit which is
3 operatively connected to the transfer unit and/or with the
4 device according to one of the claims ~~24~~ 25 to 35 and 42.

1 41. (currently amended) The hearing device according to
2 claim 40, comprising a wireless link between the input unit
3 and the transfer unit and/or between the input unit and the
4 device according to one of the claims ~~24~~ 25 to 35 and 42,
5 respectively.

1 42. (new) A device for identifying an acoustic scene in
2 an input signal, the device comprising:
3 - at least two processing stages;

4 - a feature extraction unit in at least one of the at
5 least two processing stages; and
6 - a classification unit in each one of said at least two
7 processing stages, wherein
8 the input signal is fed to the feature extraction unit,
9 an output of which is at least fed to one of the at
10 least two classification units, and wherein at least
11 one of the at least two classification units is
12 operatively connected to at least another of the at
13 least two classification units in order to adjust
14 processing according to class information in another
15 processing stage.